

REMARKS

As a preliminary matter, Applicants have amended Claims 1, 9 and 11 for grammatical reasons, without affecting the scope of these claims.

Claims 1, 2, 6 and 7 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by United States Patent No. 6,016,296 to Kim (hereinafter “the Kim reference”). Applicants respectfully traverse this rejection.

Applicants respectfully submit that the Kim reference fails to disclose all of the features of the present invention. More specifically, the Kim reference fails to disclose an information storage apparatus that includes, *inter alia*, a decelerator for decelerating rotation of an information recording medium in either “a first deceleration mode which consumes a relatively large amount of power” or in a “second declaration mode which consumes a relatively small amount of power,” and where the selection between the first and second modes is made “depending upon whether said recognition section recognizes that said electric power is the power of the predetermined level or more, or that said electric power is less than the predetermined level,” as defined in independent Claim 1.

The invention of independent Claim 1 relates to an information storage apparatus with a decelerator that can operate to decelerate (i.e., slow down) the rotating speed of a medium in either of two modes -- a first mode that uses a relatively large amount of power or a second mode that uses a relatively small amount of power. Such a decelerator could be used, for example, when ejecting the medium from the storage apparatus. The selection between the first and second modes is based on whether the power is greater or less

than a predetermined level. For example, when the power is less than a predetermined level (e.g., if the battery is low), the second mode would be used to conserve battery life, but when the power is equal to or greater than the predetermined level (e.g., if the battery is not low), the first mode could be used to minimize the time required to eject the medium.

In contrast, the device of the Kim reference lacks such a two-mode decelerator in which one mode decelerates the rotation of the medium using a relatively small amount of power while the other mode decelerates the rotation of the medium using a relatively large amount of power. In the November 3, 2004 Office Action (on page 13 of the Detailed Action), the Examiner argues that at a higher rotation speed the apparatus consumes more power than at a lower rotation speed. While this is most likely true, Claim 1 refers to the amount of power used for decelerating in each of the two different modes, and not the amount of power used when the medium is rotated at one speed or another speed. More specifically, Claim 1 recites that the decelerator is “for decelerating rotation . . . in a first deceleration mode which consumes a relatively large amount of power, or [for] decelerating rotation . . . in a second deceleration mode which consumes a relatively small amount of power.” In other words, Claim 1 refers to the amount of power required to reduce the rotation speed (i.e., decelerate the medium’s rotation), not the power required for a specific rotation speed.

The Kim reference is silent on varying the amount of power required to decelerate from one rotation speed to another. In fact, the device of Kim may actually use more deceleration power when the power supply is at its lowest, which is directly opposite of

the device of Claim 1. For example, when the power supply of the device of Kim is at the lowest voltage, it decelerates from full speed (8x) to one quarter speed (2x), which presumably requires more power than when decelerating from full speed (8x) to three quarter speed (6x), which occurs at a higher voltage supply than the lowest voltage mentioned above.

Accordingly, as all of the features of Claim 1 are not disclosed in the Kim reference, Applicants respectfully request the withdrawal of this § 102 (b) rejection of independent Claim 1 and associated dependent Claims 2, 6 and 7.

Claims 9 and 10 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by United States Patent No. 5,715,157 to Kühn (hereinafter “the Kühn reference”). Claim 10 was cancelled, without prejudice, in Amendment C, thereby rendering this rejection moot with respect to this claim. However, with respect to Claim 9, Applicants respectfully traverse this rejection.

Applicants respectfully submit that the Kühn reference fails to disclose all of the features of the present invention. More specifically, the Kühn reference fails to disclose an information storage apparatus with an intermittent braking decelerator that “intermittently operates said brake to decelerate the rotation of said information recording medium, and subsequently continuously operates said brake to further decelerate the rotation of the information recording medium” (emphasis added), as defined in independent Claim 9.

The Kühn reference fails to include the claimed decelerator of Claim 9 that operates the brake in two stages --first in an intermittent braking stage and then in a continuous braking stage. Instead, the decelerator of Kühn operates the brake as either a

single braking pulse or a series of several braking pulses, with no disclosure of operating the brake in two stages (intermittent operation followed by continuous operation).

On page 14 of the November 3, 2004 Office Action, the Examiner states that intermittent braking followed by continuous braking is not recited in Claim 9. In response, the Examiner's attention is directed to lines 11-14 of Claim 9, which recite that the braking decelerator "intermittently operates said brake to decelerate the rotation of said information recording medium, and subsequently continuously operates said brake to further decelerate the rotation of the information recording medium" (emphasis added). Thus, Applicants submit that this feature is clearly recited in Claim 9, and because this feature is not found in the Kühn reference, Applicants respectfully request the withdrawal of this § 102 (b) rejection of Claim 9.

Claims 3-5, 8, 11 and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Kim reference in view of Kühn reference. Applicants respectfully traverse this rejection.

Claims 3-5 and 8 all depend from independent Claim 1, and therefore include all of the features of Claim 1, plus additional features. Accordingly, Applicants respectfully request that the § 103 rejection of dependent Claims 3-5 and 8 under the Kim reference in view of Kühn reference be withdrawn considering the above remarks directed to independent Claim 1, and also because the Kühn reference fails to remedy the deficiencies noted above, nor was it relied upon as such.

With regard to independent Claim 11, Applicants respectfully submit that the proposed combination of the Kim reference and the Kühn reference fails to include all of the claimed features. More specifically, this proposed combination is not directed to an information storage apparatus in which the signal controlling decelerator first “inputs the signal indicating rotation speed lower than the [current] rotation speed” and second “subsequently operates said brake to further decelerate and stop the rotation,” as defined in independent Claim 11.

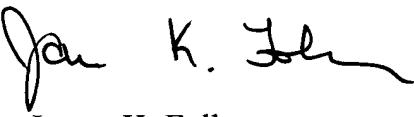
As correctly acknowledged by the Examiner, the Kim reference does not disclose a brake for applying a brake force to the medium. Accordingly, the Examiner relied upon the Kühn reference for this feature. However, Applicants submit that even when the Kühn reference and the Kim reference are considered together, one of ordinary skill in the art would not have arrived at the present invention of Claim 11 in which the rotation is stopped by a two part process (first inputting a signal indicating the lower rotation speed followed by operating the brake). More specifically, Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to use the claimed two-part process. Instead, it is more likely that one would have either used the deceleration process of the Kim reference or the braking process of the Kühn reference, but would not have arrived at the claimed two part process, defined in Claim 11, of: (1) inputting a signal indicating the lower rotation speed; and (2) then operating the brake. Accordingly, as all of the features of Claim 11 are not disclosed or suggested in the cited references, alone or in combination, Applicants

respectfully request the withdrawal of this § 103 rejection of independent Claim 11 and associated dependent Claim 12.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By 
James K. Folker
Registration No. 37,538

February 2, 2005

Suite 2500
300 South Wacker Drive
Chicago, Illinois 60606
(312) 360-0080

Customer No. 24978

P:\DOCS\1115\65144\827620.DOC